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(54) METHOD OF FRACTURING SUBTERRANEAN FORMATIONS WITH CROSSLINKED FLUID

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patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal dis-

claimer.

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Related U.S. Application Data

- (63) Continuation of application No. 13/764,638, filed on Feb. 11, 2013, now Pat. No. 9,194,223, which is a continuation-in-part of application No. 12/642,662, filed on Dec. 18, 2009, now Pat. No. 8,371,383.
- (51) Int. Cl.

 E21B 43/267 (2006.01)

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- (52) U.S. Cl.

(58) **Field of Classification Search**CPC E21B 43/267 See application file for complete search history.

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(57) ABSTRACT

Subterranean formations are subjected to hydraulic fracturing with an aqueous fracturing fluid having guar or a derivative thereof, a borate crosslinking agent and proppant. The fracturing fluid is prepared in a blender and then pumped into the wellbore through an entrance site. The apparent viscosity of the fluid decreases distally from the entrance site such that (i) the apparent viscosity of the fracturing fluid 100 feet from the entrance site is less than 10 percent of the apparent viscosity of the fracturing fluid at the entrance site; (ii) the apparent viscosity of the fracturing fluid 15 minutes after introduction into the entrance site is less than 15% of the apparent viscosity of the fracturing fluid at the entrance site; or (iii) the apparent viscosity of the fracturing fluid is less than 10 cP within 15 minutes after being introduced through the entrance site.

31 Claims, 6 Drawing Sheets

